

## ABSTRACT

**MULTICAST RADIO COMMUNICATION SYSTEM AND APPARATUS**

5 A multicast radio data communication system comprising a master and  
a plurality of slave stations uses a retransmission protocol. Data (13) is  
transmitted by the master station and received by the slave stations. Slave  
stations having the weakest radio link are designated primary stations, and all  
other slaves are designated secondary stations. Any slave station may  
10 transmit a negative acknowledgement but only the primary stations may  
transmit a positive acknowledgement. Positive acknowledgements are  
transmitted in separate time slots (1,2,3,4), but negative acknowledgements  
(9,10) transmitted by the secondary stations overlap the positive  
acknowledgements transmitted by primary stations. These negative  
15 acknowledgements corrupt reception of the positive acknowledgement by the  
master station, thereby ensuring that the data is retransmitted.

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(Figure 3)